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(54) Title: GENE ENCODING NADE, P75^{NTR}-ASSOCIATED CELL DEATH EXECUTOR AND USES THEREOF

(57) Abstract: This invention provides an isolated nucleic molecule encoding a polypeptide capable of binding a p75^{NTR} receptor, and a purified version of said polypeptide capable of binding a p75^{NTR} receptor. This invention provides a method of producing a purified polypeptide capable of binding a p75^{NTR} receptor. This invention provides an antisense oligonucleotide having a nucleic acid sequence capable of specifically hybridizing to an mRNA molecule encoding the above described polypeptide. This invention provides a method of producing a polypeptide capable of binding p75^{NTR} receptor into a suitable vector. This invention provides a method of inducing apoptosis, a method of determining physiological effects, a method for identifying an apoptosis inducing or inhibiting compound, a method for screening cDNA libraries of said polypeptide, a method to induce caspase-2 and caspase-3 activity to cleave poly (ADP-ribose) polymerase and fragment nuclear DNA in a cell, a method to inhibit NF-kB activation in a cell, a method to detect a neurodegenerative disease, a method of producing the isolated human HGR74 protein into a suitable vector, a pharmaceutical composition comprising a purified polypeptide capable of binding a p75^{NTR} receptor and a pharmaceutically acceptable carrier and a method of identifying a compound which is an apoptosis inhibitor.

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